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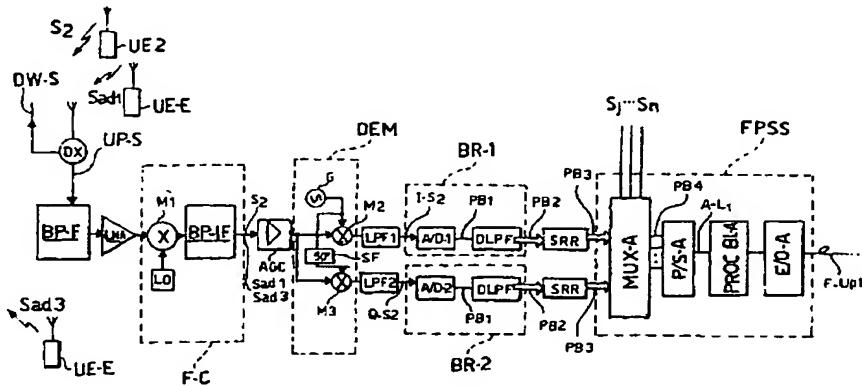
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(54) Title: RADIO BASE STATION RECEIVER HAVING DIGITAL FILTERING AND REDUCED SAMPLING FREQUENCY



U-RRP

(57) **Abstract:** Station (U-RRP) for processing a first signal which can be generated by a mobile terminal and belongs to a plurality of signals for mobile radio communications networks, said station including: an input able to receive from an antenna (A) the first signal associated with a first band and at least one adjacent signal of said plurality associated with a second band adjacent to that of the first signal; a processing stage (BP-IP, DEM, AD-1) for generating from the first digital signal at a first sampling frequency, this first digital signal including a useful spectral content of the first signal and an interfering spectral content associated with said adjacent signal; a digital filter (DLPF) for processing the first digital signal, attenuating the interfering spectral content, and for providing a filtered digital signal including at least part of said useful spectral content, sampled at a second sampling frequency less than the first sampling frequency and an electro-optical converter (E/O-A) for generating from said filtered digital signal electromagnetic radiation to be transmitted on a waveguide (F-up1).



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